

## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	10/076,136
Filing Date	February 14, 2002
First Named Inventor	Chien
Group Art Unit	1743
Examiner Name	Alexander
Attorney Docket No.	100/13010

## ENCLOSURES (check all that apply)

- ☐ Fee Transmittal Form (in duplicate)  
☐ Fee Attached  
☐ No Fee Required  
☐ Preliminary Amendment  
☐ After Final  
☐ Affidavits/declaration(s)  
☐ Extension of Time Request  
☐ Express Abandonment Request  
☒ Info. Discl. Stmt. (2 pages)  
☐ Certified Copy of Priority Document(s)  
☐ Response to Missing Parts/Incomplete Application  
☐ Response to Missing Parts under 37 CFR 1.52 or 1.53

- ☐ Assignment Papers (for an Application)  
☐ Drawings  
☐ Licensing-related Papers  
☐ Petition Routing Slip (PTO/SB/69) and Accompanying Petition  
☐ To Convert a Provisional Application  
☐ Power of Attorney, Revocation Change of Correspondence Address  
☐ Terminal Disclaimer  
☐ Small Entity Statement  
☐ Request for Refund

- ☐ After Allowance Communication to Group  
☐ Appeal Communication to Board of Appeals and Interferences  
☐ Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)  
☐ Proprietary Information  
☐ Status Letter

☒ Additional Enclosure(s)  
(please identify below):

PTO Form 1449 (3 pages)  
42 references  
Return Receipt Postcard

## Authorization to Charge Deposit Account

Please charge Deposit Account No. 03-0177 for any additional fees associated with this paper or during the pendency of this application.

Remarks

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Donald R. McKenna	Reg. No.	44,922
Signature	<i>Donald R. McKenna</i>		
Date	1/23/03		

## CERTIFICATE OF MAILING

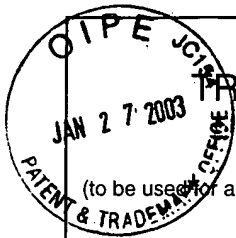
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on this date: January 23, 2003

Typed or Printed Name	Michelle Chan
Signature	<i>Michelle Chan</i>
Date:	<u>January 23, 2003</u>

1743

(Modified) PTO/SB/21 (12-97)

For use through 9/30/00 OMB 0651-0031

TRANSMITTAL  
FORM

(to be used for all correspondence after initial filing)

Application Number	10/076,136
Filing Date	February 14, 2002
First Named Inventor	Chi n
Group Art Unit	1743
Examiner Name	Alexander
Attorney Docket No.	100/13010
Total number of pages This Submission	

RECEIVED  
JAN 28 2003  
TC 1700

## ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form (in duplicate) <input type="checkbox"/> Fee Attached <input type="checkbox"/> No Fee Required <input type="checkbox"/> Preliminary Amendment <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Info. Discl. Stmt. (2 pages) <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawings <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition Routing Slip (PTO/SB/69) and Accompanying Petition <input type="checkbox"/> To Convert a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Small Entity Statement <input type="checkbox"/> Request for Refund	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Additional Enclosure(s) (please identify below): <b>PTO Form 1449</b> <b>3 references</b> <b>Search Report</b> <b>Return Receipt Postcard</b>
<b>Authorization to Charge Deposit Account</b> Please charge Deposit Account No. 03-0177 for any additional fees associated with this paper or during the pendency of this application.		
Remarks		

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual	Donald R. McKenna	Reg. No.	44,922
Signature	<i>Donald R. McKenna</i>		
Date	1/21/03		

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on this date: <i>January 21, 2003</i>		
Typed or Printed Name	Michelle Chan	
Signature	<i>Michelle Chan</i>	Date: <i>January 21, 2003</i>

I hereby certify that this correspondence is being deposited  
with the United States Postal Service as first class mail  
addressed to:  
Assistant Commissioner for Patents  
Washington, D.C. 20231

PATENT  
100/13010

RECEIVED

JAN 28 2003

TC 1700

January 23, 2003  
By Michelle Chan  
Michelle Chan

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

RING-LING CHIEN et al.

Application No.: 10/076,136

Filed: February 14, 2002

For: MICROFLUIDIC SYSTEMS WITH  
ENHANCED DETECTION SYSTEMS

Examiner: L. Alexander

Art Unit: 1743

SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER 37  
CFR § 1.97 AND 1.98

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The references cited on the attached form PTO-1449 are being called to the  
attention of the Examiner. A copy of each is enclosed.

It is respectfully requested that the cited information be expressly considered  
during the prosecution of this application, and the references be made of record therein and  
appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the  
information and references cited are prior art merely because they are in this statement and no  
representation is made that a search has been conducted or that this statement encompasses all  
possible relevant information.

RING-LING CHIEN et al.

Serial No. 10/076,136

Page 2

The undersigned hereby certifies that each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.

Applicants believe that no fee is required for submission of this statement as a proper certification pursuant to 37 CFR §1.97(e) is included above. However, if a fee is required, the Commissioner is authorized to charge such fee to Deposit Account No. 03-0177. Please charge any additional fees or credit any overpayment to the above-noted deposit account.

Respectfully submitted,



Donald R. McKenna

Reg. No. 44,922

CALIPER TECHNOLOGIES CORP.

605 Fairchild Drive

Mountain View, CA 94043

Ph: (650) 623-0700

Fax: (650) 623-0500

DRM:mc



RECEIVED

JAN 28 2003

TC 1700

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Complete if Known	
		Application Number	10/076,136
		Filing Date	February 14, 2002
		First Named Inventor	Chien
		Art Unit	1743
Examiner Name	Al xander		
Attorney Docket Number	100/13010		
Sheet		of	3

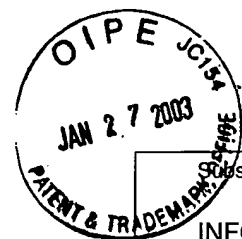
U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document No.	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code (if known)			
	AA	US-5,593,838	01-14-1997	Zanzucchi et al.	
	AB	US-5,716,852	02-10-1998	Yager et al.	
	AC	US-5,858,187	01-12-1999	Ramsey et al.	
	AD	US-5,932,100	08-03-1999	Yager et al.	
	AE	US-6,001,229	12-14-1999	Ramsey	
	AF	US-6,042,709	03-28-2000	Parce et al.	
	AG	US-6,062,261	05-16-2000	Jacobson et al.	
	AH	US-6,120,666	09-16-2000	Jacobson et al.	
	AI	US-6,235,471	05-22-2001	Knapp et al.	
	AJ	US-6,280,589	08-29-2001	Manz et al.	
	AK				
	AL				

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Country Code - Number - Kind Code (if known)				
	AM					
	AN					

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AO	EFFENHAUSER, C.S. et al., "Glass Chips for High-Speed Capillary Electrophoresis Separations with Submicrometer Plate Heights," Anal. Chem. (1993) 65: 2637-2642	
	AP	EFFENHAUSER, C.S. et al., "High Speed Separation of Anitsense Oligonucleotides on a Micromachined Capillary Electrophoresis Device," Anal. Chem. (1994) 66: 2949-2953	
	AQ	EFFENHAUSER, C.S. et al., "Integrated Capillary Electrophoresis on Flexible Silicone Microdevices: Analysis of DNA Restriction Fragments and Detection of Single DNA Molecules on Microchips," Anal. Chem. (1997) 69: 3451-3457	

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



RECEIVED

JAN 28 2003  
TC 1700

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Complete if Known			
		Application Number	10/076,136		
		Filing Date	February 14, 2002		
		First Named Inventor	Chien		
		Art Unit	1743		
Examiner Name	Alexander				
Sheet		of	3	Attorney Docket Number	100/13010

	AR	FAN, Z.H. et al., "Micromachining of Capillary Electrophoresis Injectors and Separators on Glass Chips and Evaluation of Flow at Capillary Intersections," Anal. Chem. (1994) 66: 177-184	
	AS	FISTER, J.C. III et al., "Counting Single Chromophore Molecules for Ultrasensitive Analysis and Separations on Microchip Devices," Anal. Chem. (1998) 70: 431-437	
	AT	HADD, A.G. et al., "Microfluidic Assays of Acetylcholinesterase," Anal. Chem. (1999) 71: 5206-5212	
	AU	HARRISON, J. et al., "Capillary Electrophoresis and Sample Injection Systems Integrated on a Planar Glass Chip," Anal. Chem. (1992) 64: 1926-1932	
	AV	HARRISON, J. et al., "Towards Miniaturized Electrophoresis and Chemical Analysis Systems on Silicon: An Alternative to Chemical Sensors*," Sensors and Actuators B (1993) 10: 107-116	
	AW	HARRISON, J. et al., "Micromachining a Miniaturized Capillary Electrophoresis-Based Chemical Analysis System on a Chip," Science (1993) 261: 895-897	
	AX	HARRISON, D.J. et al., "Integrated Electrophoresis Systems for Biochemical Analyses," Solid-State Sensor and Actuator Workshop (1994) 21-24	
	AY	JACOBSON, S.C. et al., "Effects of Injection Schemes and Column Geometry on the Performance of Microchip Electrophoresis Devices," Anal. Chem. (1994) 66:1107-1113	
	AZ	JACOBSON, S.C. et al., "High-Speed Separations on a Microchip," Anal. Chem. (1994) 66: 1114-1118	
	BA	JACOBSON, S.C. et al., "Open Channel Electrochromatography on a Microchip," Anal. Chem. (1994) 66: 2369-2373	
	BB	JACOBSON, S.C. et al., "Precolumn Reactions with Electrophoretic Analysis Integrated on a Microchip," Anal. Chem. (1994) 66: 4127-4132	
	BC	JACOBSON, S.C. et al., "Microchip Electrophoresis with Sample Stacking," Electrophoresis (1995) 16: 481-486	
	BD	JACOBSON, S.C. et al., "Integrated Microdevice for DNA Restriction Fragment Analysis," Anal. Chem. (1996) 68: 720-723	
	BE	JACOBSON, S.C. et al., "Electrokinetic Focusing in Microfabricated Channel Structures," Anal. Chem. (1997) 69: 3212-3217	
	BF	JACOBSON, S.C. et al., "Microfluidic Devices for Electrokinetically Driven Parallel and Serial Mixing," Anal. Chem. (1999) 71: 4455-4459	
	BG	MANZ, A. et al., "Miniaturized Total Chemical Analysis Systems: a Novel Concept for Chemical Sensing," Sensors and Actuators (1990) B1: 244-248	

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	<b>10/076,136</b>		
		Filing Date	<b>February 14, 2002</b>		
		First Named Inventor	<b>Chien</b>		
		Art Unit	<b>1743</b>		
Sheet		of	<b>3</b>	Examiner Name	<b>Alexander</b>
				Attorney Docket Number	<b>100/13010</b>

RECEIVED  
JAN 28 2003

TC 1700

	BH	MANZ, A. et al., "Micromachining of Monocrystalline Silicon and Glass for Chemical Analysis Systems," Trends in Analytical Chemistry (1991) 10:144-149	
	BI	MANZ, A. et al., "Planar Chips Technology for Miniaturization and Integration of Separation Techniques into Monitoring Systems," Journal of Chromatography (1992) 593:253-258	
	BJ	MANZ, A. et al., "Parallel Capillaries for High Throughput in Electrophoretic Separations and Electroosmotic Drug Discovery Systems," International Conference on Solid-State Sensors and Actuators (1997) 915-918	
	BK	McCORMICK, R.M. et al., "Microchannel Electrophoretic Separations of DNA in Injection-Molded Plastic Substrates," Anal. Chem. (1997) 69: 2626-2630	
	BL	MOORE, A.W. et al., "Microchip Separations of Neutral Species via Micellar Electrokinetic Capillary Chromatography," Anal. Chem. (1995) 67: 4184-4189	
	BM	SALIMI-MOOSAVI, H. et al., "Biology Lab-on-a-Chip for Drug Screening," Solid-State Sensor and Actuator Workshop (1998) 350-353	
	BN	UEDA, M. et al., "Imaging of a Band for DNA Fragment Migrating in Microchannel on Integrated Microchip," Materials Science and Engineering C (2000) 12:33-36	
	BO	WANG, C. et al., "Integration of Immobilized Trypsin Bead Beds for Protein Degestion within a Microfluidic Chip Incorporating Capillary Electrophoresis Separations and an Electrospray Mass Spectrometry Interface," Rapid Commun. Mass Spectrom. (2000) 14:1377-1383	
	BP	WOOLLEY, A.T. et al., "Ultra-High-Speed DNA Fragment Separations Using Microfabricated Capillary Array Electrophoresis Chips," Proc. Natl. Acad. Sci. USA (1994) 91:11348-11352	
	BQ	WOOLLEY, A.T. et al., "Functional Integration of PCR Amplification and Capillary Electrophoresis in a Microfabricated DNA Analysis Device," Anal. Chem. (1996) 68: 4081-4086	
	BR	WOOLLEY, A.T. et al., "High-Speed DNA Genotyping Using Microfabricated Capillary Array Electrophoresis Chips," Anal. Chem. (1997) 69:2181-2186	
	BS	WOOLLEY, A.T. et al., "Capillary Electrophoresis Chips with Integrated Electrochemical Detection," Anal. Chem. (1998) 70: 684-688	
	BT	ZHANG, B. et al., "Microfabricated Devices for Capillary Electrophoresis-Electrospray Mass Spectrometry," Anal. Chem. (1999) 71:3258-3264	
	BU		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

I hereby certify that this correspondence is being deposited  
with the United States Postal Service as first class mail  
addressed to:  
Assistant Commissioner for Patents  
Washington, D.C. 20231

PATENT  
100/13010

*January 21, 2003*  
By *Michelle Chan*  
Michelle Chan

RECEIVED  
JAN 28 2003  
IC 1700

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

RING-LING CHIEN et al.

Application No.: 10/076,136

Filed: February 14, 2002

For: MICROFLUIDIC SYSTEMS WITH  
ENHANCED DETECTION SYSTEMS

Examiner: L. Alexander

Art Unit: 1743

SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT UNDER 37  
CFR § 1.97 AND 1.98

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

The references cited on the attached form PTO-1449 are being called to the attention of the Examiner. A copy of each is enclosed. Also enclosed is a copy of the international search report for the related PCT application.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is made that a search has been conducted or that this statement encompasses all possible relevant information.



RING-LING CHIEN et al.

Serial No. 10/076,136

Page 2

The undersigned hereby certifies that each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this information disclosure statement.

Applicants believe that no fee is required for submission of this statement as a proper certification pursuant to 37 CFR §1.97(e) is included above. However, if a fee is required, the Commissioner is authorized to charge such fee to Deposit Account No. 03-0177. Please charge any additional fees or credit any overpayment to the above-noted deposit account.

Respectfully submitted,



Donald R. McKenna  
Reg. No. 44,922

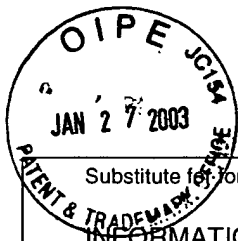
CALIPER TECHNOLOGIES CORP.

605 Fairchild Drive  
Mountain View, CA 94043

Ph: (650) 623-0700

Fax: (650) 623-0500

DRM:mc



Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)		Complete if Known			
		Application Number	10/076,136		
		Filing Date	February 14, 2002		
		First Named Inventor	Chien		
		Art Unit	1743		
		Examiner Name	Al xander		
Sheet	1	of	1	Attorney Docket Number	100/13010

RECEIVED  
JAN 28 2003  
TC 1700

U.S. PATENT DOCUMENTS					
Examiner Initials	Cite No.	Document No.	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code (if known)			
	AA	US-5,928,880	07-27-1999	Wilding et al.	
	AB				
	AC				
	AD				
	AE				
	AF				
	AG				
	AH				
	AI				
	AJ				
	AK				
	AL				

FOREIGN PATENT DOCUMENTS						
Examiner Initials	Cite No.	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Country Code - Number - Kind Code (if known)				
	AM	WO-9944217	09-02-1999	Caliper		
	AN	WO-0120309	03-22-2001	Aclara		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AO		
	AP		
	AQ		
	AR		
	AS		

Examiner Signature		Date Considered	
-----------------------	--	--------------------	--

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.